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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,771	07/06/2001	Ichiro Mase	P/2856-22	7693

7590 03/31/2005

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EXAMINER

BERNATZ, KEVIN M

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,771

Applicant(s)

MASE ET AL.

Examiner

Kevin M Bernatz

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Examiner's Comments

2. Applicants' declaration, filed January 21, 2005, has been carefully considered by the Examiner and has been entered into the record of the above identified application.

Request for Continued Examination

3. The Request for Continued Examination (RCE) under 37 CFR 1.53 (d) filed on January 21, 2005 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 103

4. Claims 1, 4, 5, 8, 9, 12, 13, 15, 16 and 18 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al. (U.S. Patent No. 6,176,453) in view of Okamoto et al. (EP 0919647 A1) for the reasons of record as set forth in Paragraph No.'s 2 – 17 of the Office Action mailed on August 4, 2004.

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5. Claims 3, 6, 7, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al. in view of Okamoto et al. as applied above, and further in view of Babel et al. (U.S. Patent No. 5,296,285) for the reasons of record as set forth in Paragraph No.'s 18 – 26 of the Office Action mailed on August 4, 2004.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al. in view of Okamoto et al. as applied above, and further in view of Bjorndahl et al. (U.S. Patent No. 6,005,771) for the reasons of record as set forth in Paragraph No.'s 27 – 32 of the Office Action mailed on August 4, 2004.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al. in view of Okamoto et al. as applied above, and further in view of Dalby (U.S. Patent No. 4,669,685) for the reasons of record as set forth in Paragraph No.'s 33 – 38 of the Office Action mailed on August 4, 2004.

Response to Arguments

8. **The rejection of claims 1 and 3 - 20 under 35 U.S.C § 103(a) – Long et al. in view of various references**

Applicant(s) argue(s) that one of ordinary skill in the art would not have been motivated to produce a SRD device meeting the claimed thickness, as supported by the declaration of Akira Okamoto, which states "it was impossible to reduce the thickness more by grinding because the thin SRD doesn't have enough strength for the grinding

process and it isn't easy to handle such a device" (*paragraph 4 of declaration*) and that "it was not known that the SRD could have a thickness of less than 200 microns" (*paragraph 6 of declaration*). The examiner respectfully disagrees.

First, the Examiner notes that applicants claims are not commensurate in scope with the argument presented. The only material that applicants have allegedly shown could not be formed at a thickness of 1 – 30 microns is a perovskite manganese film, which is not required in all the claims. Hence the claims are broader in scope than the argument for patentability presented by applicants.

Second, while the Examiner does not refute the declaration of Akira Okamoto that the inventors of the EP '647 A1 invention may not have been able to achieve thinner layers via the method that they were utilizing, the Examiner notes that one of ordinary skill is not limited to employing the same methods used by applicants. One of ordinary skill in the art can build upon the teachings in EP '647 A1, especially given the extremely strong desire to reduce weight for space applications, and such desire would necessarily lead to the desire to reduce thickness values for the various layers. While applicants' method may not have been capable of producing such thickness values, the Examiner notes that many prior art methods of depositing perovskite (manganese) oxides are capable of achieving these thickness ranges (see cited pertinent prior art below). Since applicants claims do not require a specific method of production, applicants arguments that such thickness values could not be obtained are not deemed persuasive when the prior art clearly teaches that various deposition techniques can be utilized to obtain films possessing thickness values of 1 – 30 microns, or even thinner.

Conclusion

9. The following prior art made of record as support for the Examiner's position, and hence pertinent to applicant's disclosure: Derwent Abstract of KR-2001-036859-A teach depositing a perovskite manganese oxide to a thickness of 500 – 4000 Angstrom (0.05 – 0.4 microns) (*Abstract*); Richards et al. (U.S. Patent No. 5,439,706) teach an OMCVD method of depositing perovskite oxides on zirconia, alumina, silica to a thickness of 0.1 – 50 microns (*col. 2, lines 11 – 16 and lines 39 – 50; col. 3, lines 13 – 31; col. 4, line 65 bridging col. 5, line 8; and col. 6, lines 10 – 14*); Perino et al. (U.S. Patent No. 5,519,566) teach forming multiple layers of perovskite oxide layers, each having a thickness of 50 – 200 Angstroms (0.005 – 0.02 microns) (*col. 10, lines 6 – 51*); Setsune et al. (U.S. Patent No. 5,527,767) teach forming perovskite oxide layers having a thickness of around 3000 Angstroms (0.3 microns) (*col. 4, lines 49 – 65*); Nakanishi et al. (U.S. Patent No. 6,432,474 B1) teach forming perovskite oxide layers having a thickness of around 100 – 300 nm (0.1 – 0.3 microns) (*col. 4, line 43 bridging col. 5, line 13*); Kamigaki (JP 11-162774 A) teach perovskite oxide films having a thickness of 2 microns or less (*Abstract*); Idemitsu Kosan Co LTD (JP 05-286702 A) teach perovskite oxide films having a thickness of 5 nm to 10 microns (*Abstract*).

10. This is a RCE of applicant's earlier Application No. 09/900,771. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL**

even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (571) 272-1505. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMB
March 29, 2005


Kevin M. Bernatz, PhD
Primary Examiner